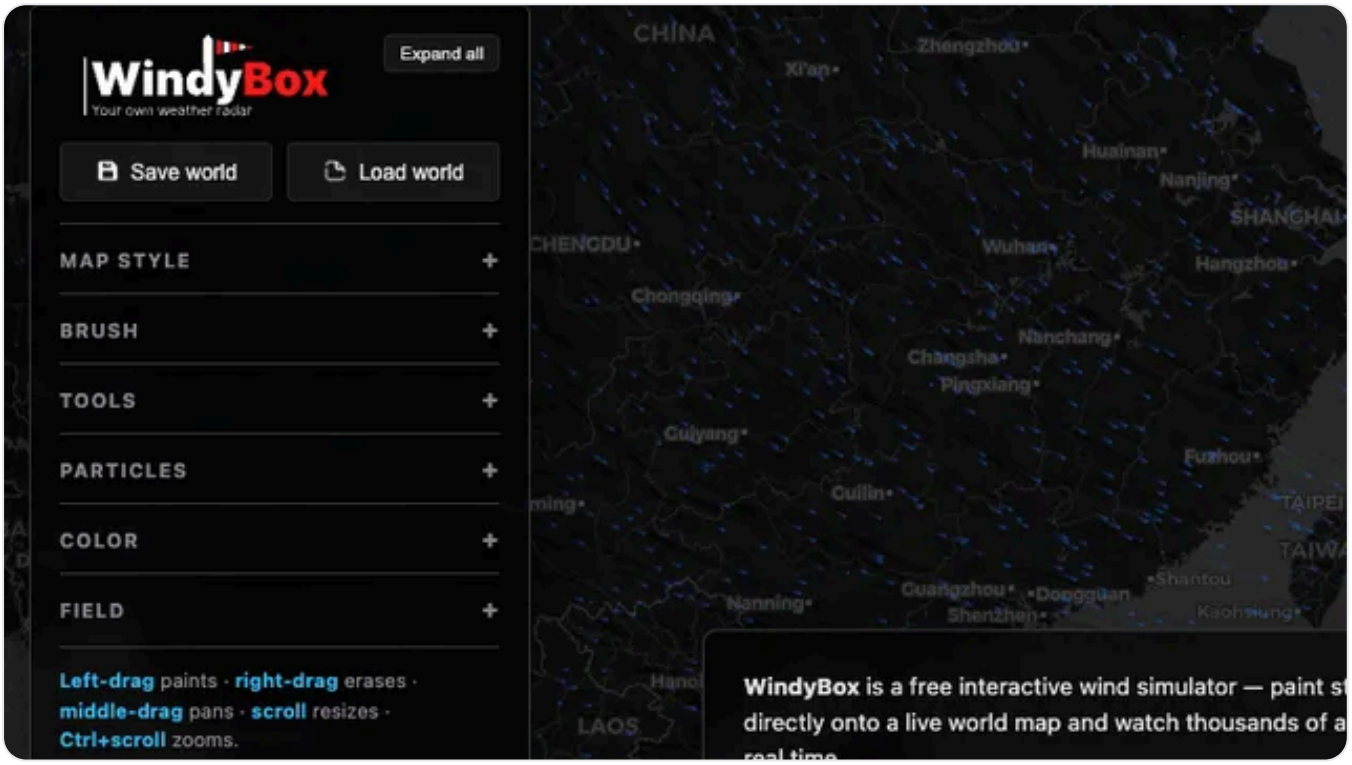
WS

Windy Sandbox

A free wind simulator where you paint storms, vortices, and custom airflow onto a live world map.



About

Windy Sandbox is a wind simulator that lets you paint airflow directly onto a live world map and watch thousands of particles respond in real time. It is a free browser tool for creating storms, vortices, typhoons, and custom wind patterns, with controls for brushes, layers, particle behavior, and map style.

What is Windy Sandbox?

Windy Sandbox is a free wind simulator built around an interactive world map. You use drawing tools to place wind patterns on the map, then the app animates thousands of particles so you can see how the flow changes over time. It is designed for

experimenting with storms, vortices, typhoons, and hand-built airflow patterns rather than for reading weather forecasts.

The experience is centered on the map itself, which can be switched between several CARTO and Esri styles. Windy Sandbox also includes controls for damage overlay, particles, weather stations, and path playback, so it feels closer to a visual lab than a simple toy. For anyone searching for a wind simulator, this app makes the core idea easy to understand: paint, observe, adjust, and replay.

Key features

Windy Sandbox focuses on a wind simulator workflow that is both visual and adjustable.

- **Brush-based painting tools**: Stream, vortex, sink, source, eraser, rotation, cyclonic, and anticyclonic modes are available.
- **Layer controls**: You can manage the display of wind particles, damage, opacity, and expanded overlays.
- **Map styles**: Dark, light, Voyager, satellite, terrain, and ocean styles are listed, along with label toggles.
- **Particle tuning**: Settings include speed, trail length, density, lifetime, contrast, and color-by-speed options.
- **Wind scale and units**: The app shows a 0–300 km/h wind scale and supports km/h, m/s, mph, and kt.
- **Path tools**: You can add waypoints, play a path, loop it, and set travel speed.
- **Interaction shortcuts**: Left-drag paints, right-drag erases, middle-drag pans, and scroll adjusts brush size.
- **Touch support**: One finger paints while two fingers pan and pinch-zoom.
- **Saving and loading**: The interface includes Save world and Load world controls.

This wind simulator also exposes lower-level parameters such as persistence, inflow, momentum reach, momentum fade, and a strength ramp editor. That makes it useful for testing how small changes affect the flow field.

How to use it

- **Choose a map style** so you can see the world the way you want, such as dark, light, satellite, or terrain.
- **Pick a tool** like Brush, Stream, Vortex, Source, Sink, or Eraser depending on the effect you want.
- **Paint on the map** with left-drag to add wind, or right-drag to remove it.
- **Adjust brush settings** such as radius, strength, and the editable strength ramp.
- **Tune the particles** if you want faster motion, longer trails, different density, or a different color scale.
- **Use the playback tools** to add waypoints, then play or loop a path at the chosen travel speed.
- **Save or load a world** once you have a setup you want to revisit.

A good first test in this wind simulator is to draw a broad stream across an ocean map, then add a vortex or cyclonic spiral nearby to see how the particles bend around it. Because the interface is live, small changes are visible quickly.

Who it is for

Windy Sandbox is a fit for people who want a wind simulator for visual experimentation instead of a technical meteorology package.

- **Designers and animators** who want a flowing particle scene or a weather-like motion study.
- **Teachers and students** who need a simple way to demonstrate airflow, turbulence, or circulation.
- **Curious hobbyists** who enjoy interactive systems and map-based sandboxes.
- **Weather enthusiasts** who want to explore stylized storms, typhoons, and custom circulation patterns.
- **People comparing control schemes** who want mouse, touch, and keyboard-friendly interaction in one web app.

The app's live feedback makes it especially approachable for visual learners. It is also useful when you want a wind simulator that can be explained through direct interaction rather than charts.

What to know before you use it

Windy Sandbox is a wind simulator, but it is not a forecasting tool and should not be treated as an official weather source.

- The map-based flow is an interactive simulation, so it may not match real atmospheric behavior.
- The app shows particles and stylized damage overlays, but it does not present evidence of live meteorological data feeds in the harvested material.
- Some labels suggest advanced controls such as persistence, inflow, momentum reach, and momentum fade; these affect the simulation rather than real weather.
- The interface includes many sliders and toggles, so first-time users may need a few minutes to understand the controls.
- If you need actual storm alerts, track conditions, or emergency guidance, use an official weather service instead of this wind simulator.

Because the app is free and browser-based, it is easy to test quickly, save a setup, and return later. For creative exploration, education, and motion studies, Windy Sandbox delivers a flexible wind simulator with enough depth to reward experimentation. If you want to paint airflow on a map and watch particles react, this wind simulator is built for exactly that.

FAQ

Is Windy Sandbox really free?

Is Windy Sandbox free to use?

Can I save the wind patterns I create?

What platform does this wind simulator run on?

What can I use Windy Sandbox for?

Can I use Windy Sandbox for real weather forecasting?

Do I need to create an account?

What kinds of effects can I draw?

What are the brush types available?

Is it suitable for classrooms or demos?

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Category	Design
Platform	Web
Launched	Aug 2026

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TAGS

visualization # wind simulation # wind simulator # particle flow # interactive map # particles # educational # interactive # map # design tool # weather # simulator

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